

~~SECRET~~ (WPAT)

AN - 88-335621/47

XRAM- C88-148441

TI - Safe antibacterial agent with micro:powder form - comprises clay mineral  
contg. at least one metal ion or cpd. between layers

DC - A60 B06 D22 D21

PA - (SHIS ) SHISEIDO KK

NP - 2

NC - 1

PN - JP63250309-A 88.10.18 (8847) 6p

JP95116008-B2 95.12.13 (9603) 4p A01N-061/00

PR - 87.04.07 87JP-084993

AP - 87.04.07 87JP-084993

FD - JP95116008 Based on JP63250309

IC - A01N-059/16 A01N-059/20 A01N-061/00

AB - (J63250309)

The antibacterial agent is composed of clay mineral. The clay mineral has  
one or at least two metal ions except sodium, potassium, lithium and  
calcium or one or at least two metal cpds. except sodium, potassium,

lithium, and calcium between layers.

The metal ion pref. comprises copper ion, cobalt ion, cadmium ion,  
silver ion, or zinc ion. The metal cpd. pref. comprises a metal  
hydroxide, or metal oxide. The metal hydroxide or the metal oxide  
comprises copper, cobalt, cadmium, silver or zinc hydroxide or oxide. The  
clay mineral comprises water swelling clay mineral. The water swelling  
clay mineral comprises layer silicate minerals belonging to the smectite  
such as montmorillonite, beidelite, nontronite, saponite, or hectorite.  
One or at least two clay minerals are used. The conc. of the clay mineral  
is at least 20 wt.%.

USE/ADVANTAGE - The antibacterial agent has high safety and has  
good antibacterial properties towards various microorganisms such as  
*Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, and  
*Propionibacterium acnes*. The antibacterial agent is used as medicines,  
skin application agent, or toilet articles. The antibacterial agent is of  
micropowder shape and easily carried on paper or a sheet. The  
antibacterial agent has thermal stability up to 500 deg.C, allowing  
pasting of the antibacterial agent into plastics. (6pp Dwg.No.0/0)